

CHAMPLAIN CANAL, WALL
East northeast of New York State
Route 32 Bridge, 169 feet from the
Northern Gaurd Lock
Waterford
Saratoga County
New York

HAER No. NY-235

HAER
NY
46-WAFO
2-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Mid-Atlantic Region
Department of the Interior
Philadelphia, Pennsylvania 19106

HISTORIC AMERICAN ENGINEERING RECORD

Champlain Canal: Wall

HAER No. NY-235

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LOCATION: Extending ENE from the east side of the NY State Route 32 bridge (over the Mohawk River) 169 feet from the Northern Guard Lock of the Champlain Canal, Town of Waterford, Saratoga County, New York

UTM: 18.606673.4736977

QUAD: Troy North, New York

DATE OF CONSTRUCTION: Circa 1822; Champlain Canal opened September 10, 1823

PRESENT OWNER: New York State Department of Transportation, Waterways Maintenance Division, State Campus, Albany, New York

PRESENT USE: Riverbank wall, unmaintained

SIGNIFICANCE: Example of laid up stone work typical of the period; associated with stream bank retaining walls/revetments built as part of early canal construction throughout the Champlain Section of the Erie Canal

PROJECT INFORMATION: In response to FERC Project Number 7481-007, Order Amending License issued 1 November 1989, authorizing construction of the New York State Dam Hydroelectric Power Project. Mitigation involves documentation of the site prior to disturbance.

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An initial survey for the Champlain waterway was undertaken by James Geddes of New York in autumn of 1817, and the basic route from Fort Edward, New York to Whitehall, New York (northern segment) was staked out. Work commenced almost immediately using gangs of immigrant laborers wielding pick axes and shovels, and by 1818 over 12 miles of ditch had been dug with dimensions conforming to New York's other canal - the Erie. By 1819 the entire stretch from Fort Edward to Whitehall, a distance of about 25 miles, was complete. However the original scheme, perhaps to economize on costs, was for boats to utilize the upper Hudson River from Fort Edward as far south as Saratoga Falls, New York. At this point another man-made channel would run as far south as Waterford, New York where it would empty into the Erie Canal. The combined canals would then proceed to Albany, New York where cargos might be transferred to large river vessels, or groups of barges could be tied together and towed by steam tug to New York City.

The southern segment was finished in 1822, three years after the northern part. Nevertheless it appeared illogical to many people to have a situation whereby two artificial, man-made canals were separated by an intermediate section of Hudson River, forcing boats to exit the canal at Fort Edward, travel down the swift flowing river to Saratoga Falls, and then re-enter another canal for the remainder of the journey. Use of the unimproved Hudson for this middle portion created difficulties for the boatmen, and in 1825 it was decided to authorize the digging of a third stretch of artificial waterway so that a continuous canal from Whitehall to Waterford might be formed, with the natural river with its rock-filled bottom bypassed entirely.

The final section of the Champlain or Northern Canal was finished in 1827. Also in 1829 a short branch or feeder canal was dug from the main channel at Fort Edward to Glens Falls, a distance of about 5 miles. Its purpose was to bring water from another portion of the Hudson River, farther north, into the canal's summit level. Furthermore, the Glens Falls feeder was made navigable, since that community constituted a valuable source of traffic.

The dimensions of the original 1827 Champlain Canal were 40 feet wide and 4 feet deep, with stone lock chambers measuring 90 feet by 15 feet. In subsequent years these figures were gradually increased, and by 1877 all locks had been rebuilt to 110 feet in length by 18 feet wide. Additionally a uniform depth was created by removing more material from the bottom of the prism. The enlargement of the Champlain was undertaken for two reasons - one to conform with the Erie Canal, which was simultaneously being improved, and the other to enable bigger, deeper bottomed boats with greater carrying capacity to use it. In 1896 a plan was drafted to expand even further the dimensions of the Champlain and Erie Canals which would have provided for a 7 foot depth and even larger locks. However by this late date in America's Canal Age

competitive forces in the form of railroads and surfaced roads were at work, and this final improvement to the New York State inland waterway network was never begun. If water transport was to coexist with the Iron Horse, an all weather form of transportation capable of fast speeds and boats of much greater carrying capacity were needed so that bulk products such as board lumber and coal could be carried in sufficient quantity so that a reasonable profit might be generated.

The best years in terms of volume of business and overall profitability for the original Champlain Canal were between 1830 and 1875. Much lumber from the Canadian wilderness was transported via this water route. Its journey often began on the shores of the St. Lawrence River. Subsequently it entered the Chambly Canal which gave access to Lake Champlain, and on to Whitehall. General merchandise including coal was also carried in the mule drawn, wooden boats, providing a lifeline to such North Country communities as Mechanicville, Saratoga, (site of a famous Revolutionary War battle), Fort Edward, Fort Ann, and Glens Falls, not to mention the tiny hamlets situated on the shores of the lake itself. Brutally cold winters meant that the canal had to be shut down from early December to late March, but during the brief summer season, traffic along the 56 mile long canal was brisk and only began to be eclipsed when nearby railroads such as the Delaware & Hudson came into their own. New York State's decision to upgrade four of its 19th century towpath canals (the Erie, Oswego, Cayuga-Seneca, and Champlain) into modern 20th Century waterways using a combination of improved rivers and wide, machine excavated channels was made in 1898, and in 1901 surveying commenced. The 1829 Champlain Canal was slated for replacement by a new navigational system involving the upper Hudson River from Waterford to Fort Edward, and a new cut-channel from Fort Edward to Whitehall, complete with electro-mechanically operated locks, large concrete chambers, and wide dimensions sufficient to permit passage of vessels in excess of 250 feet. No provision was made for a towpath; the barges were to be self propelled or pulled by steam powered tugboats. The new route of the Champlain Canal would of course parallel the 19th Century waterway from Waterford north to Whitehall and the lake. In 1905 digging began, and the days of the mule-drawn boats in the North Country were numbered.

The stone wall being documented extends from the Northern Guard Lock to the New York State Route 32 bridge abutment, which served as the towpath retaining wall for this stretch of canal from the Mohawk River to the Norther Guard Lock.

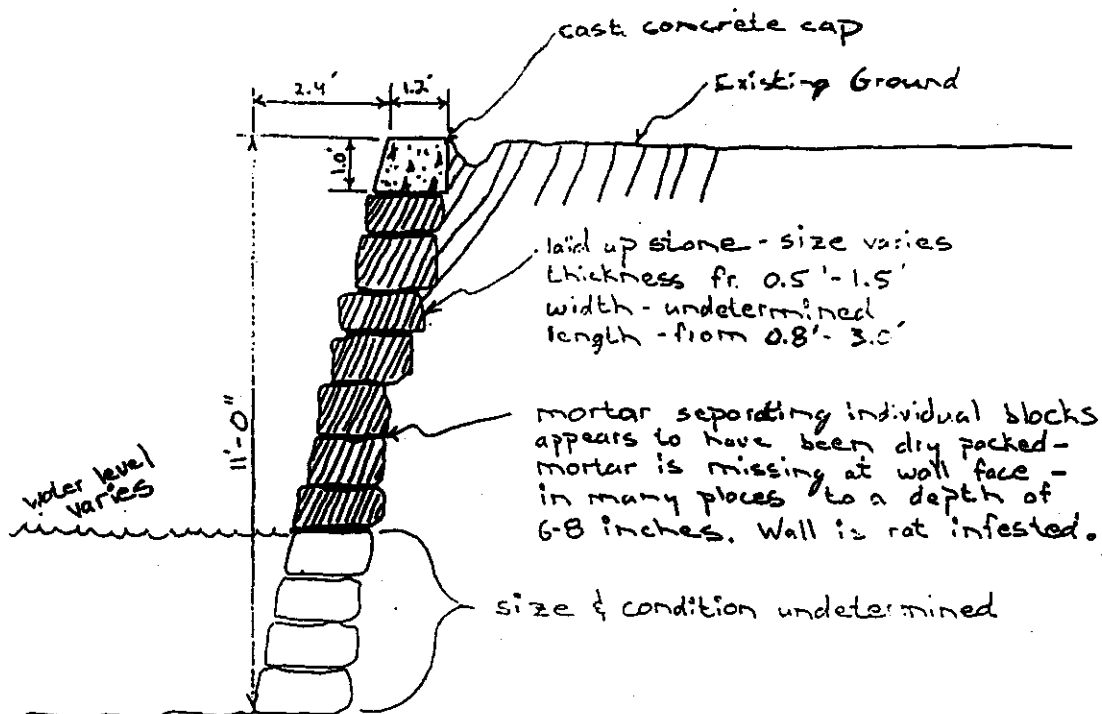
DESCRIPTION EXISTING CHANNEL WALL

Status - North wall - Champlain Canal
at point where new retaining wall will pass through it.
(Approximately 200' east of Saratoga Ave.) wall is battered
1V:0.22H.

Face of wall is fairly regular. All blocks are intact - although many have eroded faces. Until excavation is undertaken, the width of wall (in cross-section) and the foundation are undetermined. (Foundation could consist of wooden crib (stone filled) or granular fill over bedrock). Wall is basically laid up in running bond, with staggered vertical joints.

The spot in the Champlain Canal wall, where the retaining wall intersects, to the NY State Route 32 bridge, is a distance of 250.42 feet. The retaining wall which intersects the canal wall is 2.0 feet thick at the top and tapers out to 3.75 feet at its base, covering an average width of approximately 3.0 feet of existing canal wall. Where the intersection occurs, the Champlain Canal wall is approximately 1.25 feet thick.

The existing ruins of the Northern Guard Lock (southern miter gate notch) is 213.0 feet north of the north face of the retaining wall, while the existing control valves at the north end of the Northern Guard Lock are 333.0 feet north of the retaining wall (see diagram, page 5).



HAER, NY, 46-WAFD, 1-

SKETCH SITE PLAN
CHAMPLAIN CANAL; WALL
WATERFORD, N.Y.
HAER NO. NY 235
(PAGE 5)

